Name:

ml1112p: Solve by factoring (v0)

1. Solve the equation
$$x^2 + 16x + 63 = 0$$
$$(x + 7)(x + 9) = 0$$
$$x = -9$$
$$x = -7$$

2. Solve the equation
$$x^2 - 15x + 56 = 0$$
$$(x - 8)(x - 7) = 0$$
$$x = 7$$
$$x = 8$$

3. Solve the equation
$$2x^2 - 9 \;=\; x^2 - 4x - 4$$
$$x^2 + 4x - 5 = 0$$
$$(x + 5)(x - 1) = 0$$
$$x = 1$$
$$x = -5$$

4. Solve the equation
$$3x^2 + 3x + 12 \;=\; 2x^2 + 9x + 4$$
$$x^2 - 6x + 8 = 0$$
$$(x - 4)(x - 2) = 0$$
$$x = 2$$
$$x = 4$$

5. Solve the equation
$$5x^2 - x - 15 \;=\; 4x^2 - 8x - 7$$
$$x^2 + 7x - 8 = 0$$
$$(x + 8)(x - 1) = 0$$
$$x = 1$$
$$x = -8$$

6. Solve the equation

$$2x^2 + 17x + 30 = 0$$

$$(2x + 5)(x + 6) = 0$$
$$x = -6$$
$$x = \frac{-5}{2}$$

7. Solve the equation

$$3x^2 - 5x + 2 = 0$$

$$(3x - 2)(x - 1) = 0$$
$$x = 1$$
$$x = \frac{2}{3}$$

8. Solve the equation

$$7x^2 - 8x - 3 \;=\; 4x^2 - 7x + 7$$

$$3x^2 - x - 10 = 0$$
$$(3x + 5)(x - 2) = 0$$
$$x = 2$$
$$x = \frac{-5}{3}$$

9. Solve the equation

$$12x^2 + 92x + 61 \;=\; x^2 + 6x - 2$$

$$11x^2 + 86x + 63 = 0$$
$$(11x + 9)(x + 7) = 0$$
$$x = -7$$
$$x = \frac{-9}{11}$$

10. Solve the equation

$$5x^2 + 19x + 12 \;=\; 3x^2 + 2x - 9$$

$$2x^2 + 17x + 21 = 0$$
$$(2x + 3)(x + 7) = 0$$
$$x = -7$$
$$x = \frac{-3}{2}$$